



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Shoji YASUDA

Serial No. 09/617,433

Group Art Unit: 1752

Filed: July 14, 2000

Examiner: Thorl Chea

For: THERMALLY PROCESSED IMAGE FORMING MATERIAL

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DECLARATION UNDER 37 CFR 1.132

Honorable Commissioner of Patents and Trademarks,
Washington, D.C. 20231

Sir:

I, Shoji YASUDA, a Japanese citizen, having a post office address of c/o Fuji Photo Film Co., Ltd., No.210, Nakanuma Minami-ashigara-shi, Kanagawa 250-0193 Japan, hereby declare and state that I received a Master's Degree from Chiba University, the department of Engineering, in March of 1988, and I was employed by Fuji Photo Film Co., Ltd. in April of 1988, and since that time I have been principally engaged in research and development of photosensitive materials for printing at Ashigara Laboratories of the company.

I declare further that I have read all of the documents contained in the file wrapper of the above-entitled application.

I declare further that the test described below was conducted at my direction and under my supervision and the test results are true and correct to the best of my knowledge.

Method:

A photothermographic material (Sample No.11) was prepared in the same manner as Sample 101 of EP 0 887 701 A in which Organic Silver Salt Dispersion A shown on page 20 of EP 0 887 701 A and Sensitizing Dye A shown on page 22 of EP 0 887 701 A were used. In the preparation of Organic Silver Salt Dispersion A, 7.3 g of stearic acid was used with 40 g of behenic acid.

Another photothermographic material (Sample No.12) was prepared in the same manner as Sample No.11 except that Fatty Acid Silver Salt Grain Dispersion B shown on page 77 of the specification of the present application was used in place of Organic Silver Salt Dispersion A. Stearic acid was not used in the preparation of Fatty Acid Silver Salt Grain Dispersion B.

Still another photothermographic material (Sample No.13) was prepared in the same manner as Sample No.12 except that 159.87 g of stearic acid was added with 876 g of behenic acid in the preparation of fatty acid silver salt grain dispersion to obtain Fatty Acid Silver Salt Grain Dispersion B' and the dispersion was used in place of Fatty Acid Silver Salt Grain Dispersion B.

Haze, fog, sensitivity, coating surface quality and silver tone of each sample were evaluated in the manner set forth on pages 26 and 30 of EP 0 887 701 A. Surface property of each sample was also evaluated in the manner set forth on page 93 of the specification of the present application. In this test, samples having two or less agglomerated specks per 1.4 m² of their surface get rank "A".

Results:

Results are shown in the following table.

Sample No.	Preparation				Evaluation					
	Mixing means	Organic silver salt		Sensitizing dye	Evaluation of EP 0 887 701 A					Evaluation of 09/617,433
		Dispersion	Weight ratio of behenic acid to stearic acid		Haze	Fog	Sensi-tivity	Surface quality	Silver tone	
11	Open	Dispersion A of EP 0 887 701 A	1 : 0.1825	Sensitizing dye A of EP 0 887 701 A	10.0	0.11	100	◎	◎	C
12	Closed	Dispersion B of 09/617,433	1 : 0	Sensitizing dye A of EP 0 887 701 A	9.7	0.11	106	◎	◎	A
13	Closed	Dispersion B' of 09/617,433	1 : 0.1825	Sensitizing dye A of EP 0 887 701 A	9.5	0.11	107	◎	◎	A

Discussion:

The results shown in the above table indicate that Samples 12 and 13 containing the non-photosensitive fatty silver salt grains prepared in a closed mixing means exhibited improved sensitivity and excellent surface property. This improvement is significant and the superior results of Samples 12 and 13 are solely due to the use of the closed mixing means. I believe that no person skilled in the art reading EP 0 887 701 could have predicted this improvement before the claimed invention was made.

Sample 11 attained good result in the surface quality test of EP 0 887 701 A but it got poor result in the surface property test of the present application. This is because the latter test is much severer than the former test. Samples having 5 or less agglomerated specks in 0.01 m^2 get "◎" in the surface quality test of EP 0 887 701 whereas only samples having 2 or less agglomerated specks in 1.4 m^2 get "A" in the surface property test of the present application. Thus, the latter test is 350 times severer than the former test ($140 \times 2.5 = 350$). It can be concluded that the above test results indicate that the photothermographic materials of the claimed invention still exhibit excellent surface property in the severer test of the present application but the photothermographic materials of EP 0 887 701 A exhibit poor surface property.

I believe that no one skilled in the art would have been motivated to prepare non-photosensitive fatty silver salt grains in the closed mixing means and use it in a photothermographic material before the claimed invention was made. I also believe that no one skilled in the art could have predicted the excellent effects of the claimed invention before the claimed invention was made. One skilled in the art would find that the improvements achieved with the invention are unexpected. The claimed invention is non-obvious over the prior art.

In the declaration under 37 C.F.R. 1.132 dated August 11, 2003, sensitivity of Sample No.1 (comparative) is reported as "100" and sensitivity of Sample Nos. 2 and 3 (invention) is reported as "105" and "104". I declare

that this difference is significant and the data indicate superior sensitivity of Samples Nos. 2 and 3. In summarize, the data disclosed in the declaration show that Sample Nos. 2 and 3 (invention) have excellent surface property and improved sensitivity in compared with Sample No.1 (comparative).

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Dated this 16 th day of January, 2004.


Shoji YASUDA